

BookletChart™

Delaware Bay

NOAA Chart 12304

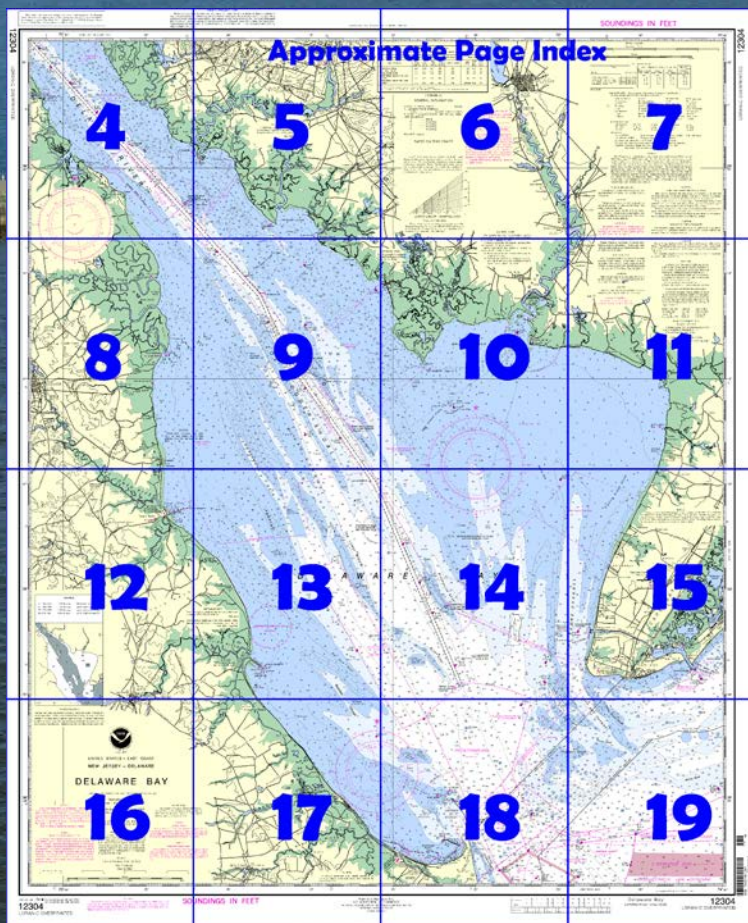


A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.



- Complete, reduced-scale nautical chart
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- Convenient size
- Up-to-date with Notices to Mariners
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National Ocean Service
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What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=12304>



(Selected Excerpts from Coast Pilot)

Delaware Bay and Delaware River form the boundary between the State of New Jersey on the east and the States of Delaware and Pennsylvania on the west. The bay is an expansion of the lower part of Delaware River; the arbitrary dividing line, 42 miles above the Delaware Capes, extends from Liston Point, Del., to Hope Creek, N.J. Deep-draft vessels use the Atlantic entrance, which is about 10 miles wide between Cape

May on the northeast and Cape Henlopen on the southwest.

Mileages shown in this chapter, such as Mile 0.9E and Mile 12W, are the nautical miles above the **Delaware Capes** (or "the Capes"), referring to a line from Cape May Light to the tip of Cape Henlopen. The letters N, S, E,

or W, following the numbers, denote by compass points the side of the river where each feature is located.

Cape May is the extensive peninsula on the northeast side of the entrance to Delaware Bay. **Cape May Light** (38°55'59"N., 74°57'37"W.), 165 feet above the water, is shown from a white tower with a red cupola and two white dwellings nearby on Cape May Point. The shoals off Cape May are mixed clay and sand and have the consistency of hardpan; the ridges run in approximately the same directions as the currents. **Cape May Channel**, 1 mile southwest of the cape, is an unmarked passage between shoals, with depths from 2 to 4 feet on either side. The channel is seldom used, and then only by fishing vessels and pleasure craft; local knowledge is required for safe passage. **Lower River and Bay.**—1. The maximum fresh water draft for river transit from sea to Delair, New Jersey is 40 feet.

2. All vessels arriving with a fresh water draft in excess of 37 feet are to transit during flood current only.

3. All vessels over Panamax size beam (106 ft) having a fresh water draft in excess of 35'–06" shall only transit during flood current.

4. Vessels outbound from Paulsboro, NJ and above, having a fresh water draft of 37 feet and up to 40 feet should arrange to sail 2 hours after low water. Due to the extended time of transit for these particular deep draft vessels, two (2) river pilots will be arranged for transit to sea.

5. The maximum salt-water draft for entrance into Delaware Bay and Big Stone Beach anchorage is 55 feet, as per federal regulation. Qualified offshore advisors with portable DGPS units are available upon request from the Pilots' Association for the Bay and River Delaware.

6. Safe Under-Keel Clearance (UKC) should be assured for all transits, taking into consideration the vessel's squat and variations of actual tidal levels due to high winds, barometric pressure, and other atmospheric conditions. Actual tidal heights for many points in the Delaware Bay and River can be determined on the NOAA PORTS web site at <http://co-ops.nos.noaa.gov/dbports/dbports.html>, or by calling 1-866-307-6787 (1-866-30-PORTS).

7. Actual tidal levels and currents will vary from predicted heights due to high winds, barometric pressure, and other atmospheric conditions. Actual tidal heights, currents, bridge air gaps, and other data can be determined for many points in the Delaware Bay and River on the NOAA PORTS web site at <http://co-ops.nos.noaa.gov/dbports/dbports.html>, or by calling 1-866-307-6787 (1-866-30-PORTS).

8. The U.S. Army Corps of Engineers periodically surveys the bottom conditions of the Delaware Bay and River main channel and anchorages, publishing the results of these surveys at <http://www.nap.usace.army.mil/channel/list.htm>.

Vessel Reporting.—It is recommended that vessels report their position and status to the Maritime Exchange over VHF-FM channel 14 in the following situations:

1. When anchoring.
2. When getting underway.
3. When passing through Marcus Hook.
4. When entering or exiting the C&D canal.
5. When making fast to the dock.
6. Tugs operating without a barge are exempt from this recommendation. Tugs with barges are requested to report to the Philadelphia Maritime Exchange when anchoring and leaving all anchorages. It is important to stand by on VHF-FM channels 14 and 16 at all times. And AIS should always be on if the vessel is equipped with it.

U.S. Coast Guard Rescue Coordination Center 24 hour Regional Contact for Emergencies

RCC Norfolk

Commander

5th CG District

Norfolk, VA

(575) 398-6231

Table of Selected Chart Notes

CAUTION
Entrance to channel may be foul with rocks.

FORTESCUE CREEK
Controlling depth for centerline is 2 feet from Delaware Bay to Downe Avenue Bridge.
Sep 1986

OYSTER GROUNDS
CAUTION - Numerous stakes and obstructions exist within these areas

Lighted dredging buoys are not charted as they are frequently moved

CAUTION
Unexploded ordnance may exist within an area extending 2.5 miles offshore from Kitts Hummock to Little River.

HEIGHTS
Heights in feet above Mean High Water.

Mercator Projection
Scale 1:80,000 at Lat. 39°06'
North American Datum of 1983
(World Geodetic System 1984)
SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

CAUTION
Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

NOAA WEATHER RADIO BROADCASTS
The NOAA Weather Radio stations listed below provide continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Atlantic City, NJ	KHB-38	162.400 MHz
Salisbury, MD	KEC-92	162.475 MHz
Lewes, DE	WXJ-94	162.550 MHz
Sudlersville, MD	WXK-97	162.500 MHz

HORIZONTAL DATUM
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.407" northward and 1.347" eastward to agree with this chart.

CAUTION
Mariners are warned to stay clear of the protective riprap surrounding navigational light structures shown thus:

WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

RACING BUOYS
Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other private buoys are not all listed in the U.S. Coast Guard Light List.

CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.
During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

RADAR REFLECTORS
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

CAUTION
Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:
 (Accurate location) (Approximate location)

AUTHORITIES
Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

COHANSEY RIVER
Controlling depths were 5 feet to Fairton; thence 6 feet to approximately 2000 yards south of Bridgeton; thence 1 foot to Bridgeton.
Mar 1968 - Sep 2003

CAUTION
SUBMARINE PIPELINES AND CABLES
Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:

Pipeline Area **Cable Area**
Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.
Covered wells may be marked by lighted or unlighted buoys.

MAURICE RIVER
Numerous buoys are not charted because they are frequently shifted in position.
Obstruction reported extending across the eastern half of the river at the shipbuilding company about 5 miles above the mouth.
Numerous uncharted wrecks exist along the banks of the river above Maurcetown.
The controlling depth is reported to be 6 feet from Buckshutem to Millville in 1967.

MISPELLION RIVER
After passing through jetties, the controlling depth was 3 feet to 38°57'00"N, 75°18'46"W.
May 2012
The controlling depth was 2 feet to the bascule bridge, thence 2 feet to Milford with shoaling to 1 foot at Milford.
Feb 1981 - Aug 1996

CAUTION
Numerous uncharted duck blinds, stakes, piles, signs and pipes, some submerged, may exist in the area of this chart.

NOTE D
PRECAUTIONARY AREA
Traffic within the PRECAUTIONARY AREA may consist of cruising pilots and vessels making the transition between operating in Delaware Bay and one of the traffic lanes. Mariners are advised to exercise extreme care in navigating within this area.

NOTE B
DANGER AREA
Area is open to unrestricted surface navigation but all vessels are cautioned neither to anchor, dredge, trawl, lay cables, bottom, nor conduct any other similar type of operation because of residual danger from mines on the bottom.

NOTE C
TRAFFIC SEPARATION SCHEME
One-way traffic lanes overprinted on this chart are RECOMMENDED for use by all vessels traveling between the points involved. They have been designed to aid in the prevention of collisions at the approaches to Delaware Bay, but are not intended in any way to supersede or alter the applicable Rules of the Road. Separation zones are intended to separate inbound and outbound traffic and to be free of ship traffic. Separation zones should not be used except for crossing purposes. When crossing traffic lanes and separation zones use extreme caution.

NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 3. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 5th Coast Guard District in Portsmouth, Virginia or at the Office of the District Engineer, Corps of Engineers in Philadelphia, Pennsylvania.
Refer to charted regulation section numbers.

HURRICANES AND TROPICAL STORMS
Hurricanes, tropical storms and other major storms may cause considerable damage to marine structures, aids to navigation and moored vessels, resulting in submerged debris in unknown locations.
Charted soundings, channel depths and shoreline may not reflect actual conditions following these storms. Fixed aids to navigation may have been damaged or destroyed. Buoys may have been moved from their charted positions, damaged, sunk, extinguished or otherwise made inoperative. Mariners should not rely upon the position or operation of an aid to navigation. Wrecks and submerged obstructions may have been displaced from charted locations. Pipelines may have become uncovered or moved.
Mariners are urged to exercise extreme caution and are requested to report aids to navigation discrepancies and hazards to navigation to the nearest United States Coast Guard unit.

POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

CAUTION
BASCULE BRIDGE CLEARANCES
For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

CAUTION
FISH TRAP AREAS AND STRUCTURES
Mariners are warned that numerous uncharted duck blinds and fishing structures, some submerged, may exist in the fish trap areas. Such structures are not charted unless known to be permanent.
Regulations to assure clear passage to and through dredged and natural channels, and to established landings, are prescribed by the Corps of Engineers in the Code of Federal Regulations.
Definite limits of fish trap areas have been established in some areas, and those limits are shown thus:
Where definite limits have not been prescribed, the location of fishing structures is restricted only by the regulations.

NOTE E
CAUTION
The controlling depth within the Five Fathom Bank inbound traffic lane is 40 feet. The Mariners Advisory Committee recommends that vessels with drafts of 35 feet or greater use the Delaware to Cape Henlopen inbound traffic lane.
The controlling depth within the Cape Henlopen to Five Fathom Bank outbound traffic lane is 43 feet.

SOURCE DIAGRAM
The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

NOTE S
Regulations for Ocean Dumping Sites are contained in 40 CFR, Parts 220-229. Additional information concerning the regulations and requirements for use of the sites may be obtained from the Environmental Protection Agency (EPA). See U.S. Coast Pilots appendix for addresses of EPA offices. Dumping subsequent to the survey dates may have reduced the depths shown.

TIDAL INFORMATION				
PLACE		Height referred to datum of soundings (MLLW)		
NAME	(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water
Cape May Point	(38°57'N/74°58'W)	Foot	Foot	Foot
Breakwater Harbor	(38°47'N/75°07'W)	5.4	5.0	0.2
Murderkill River Entrance	(39°04'N/75°24'W)	4.7	4.2	0.2
Woodland Beach	(39°20'N/75°28'W)	5.7	5.3	0.1
		6.4	6.1	0.2
Dashes (- -) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the Internet from http://tidesandcurrents.noaa.gov . (Mar 2011)				

NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 2-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at <http://ocedata.nce.noaa.gov/ldr/inquiry.aspx>, or OceanGrafix at 1-877-56CHART or <http://www.oceangrafix.com>.

SOUNDINGS IN FEET

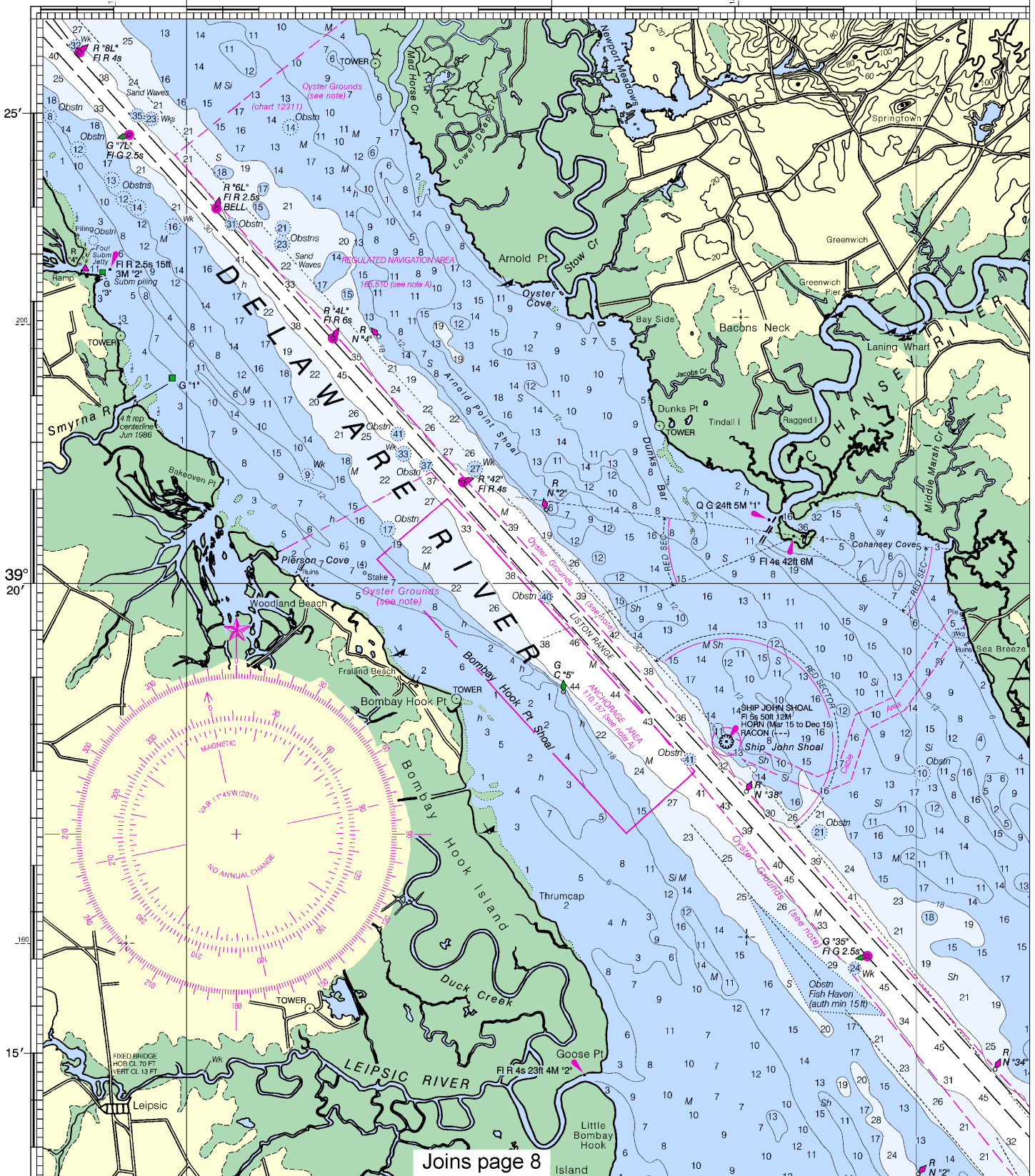
12304

75°30'

CONTINUED ON CHART 12311

25'

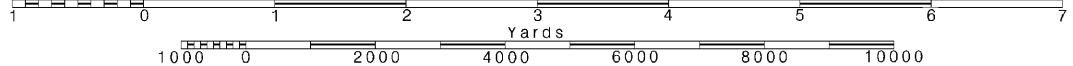
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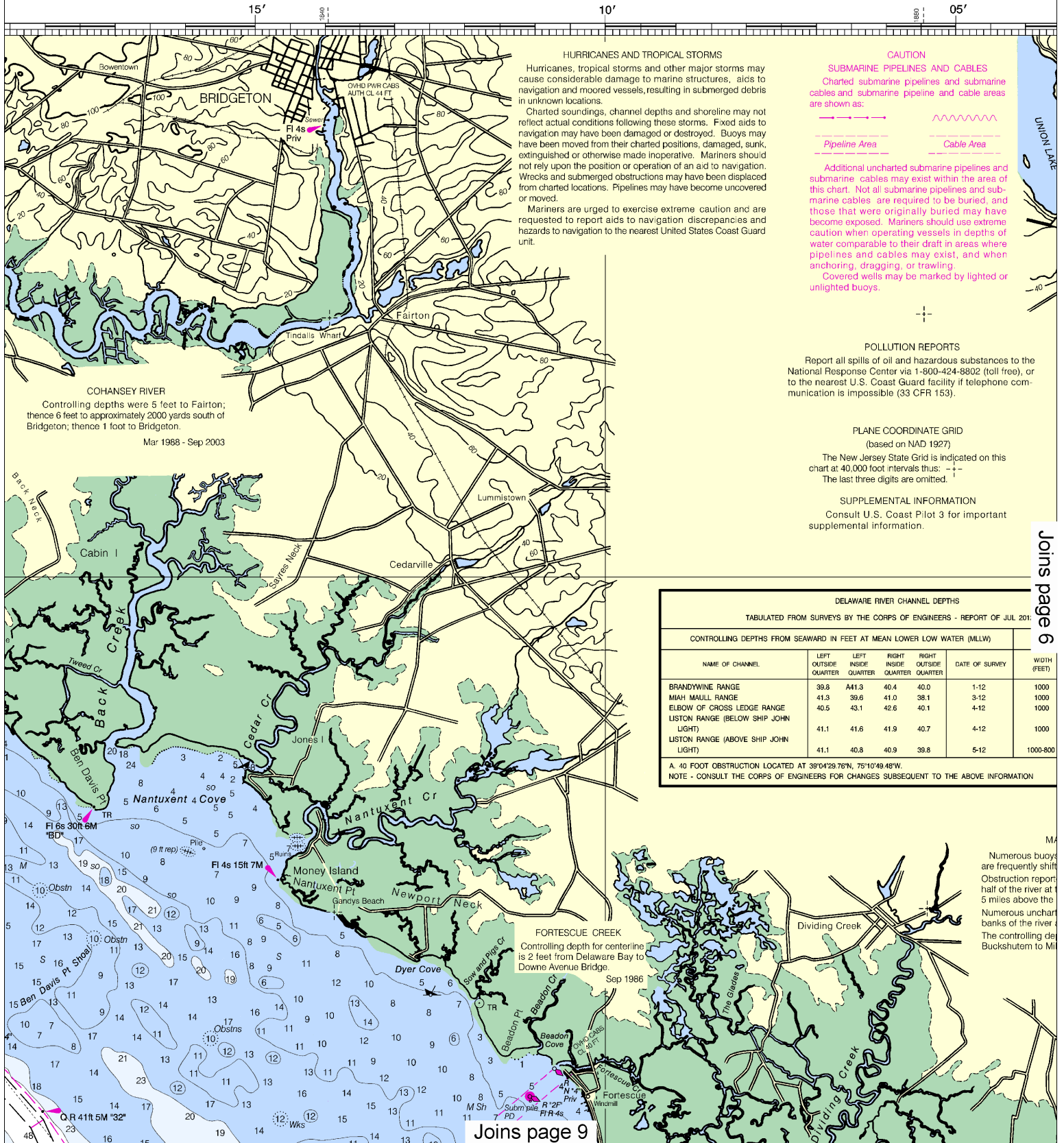
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SCALE 1:80,000
Nautical Miles

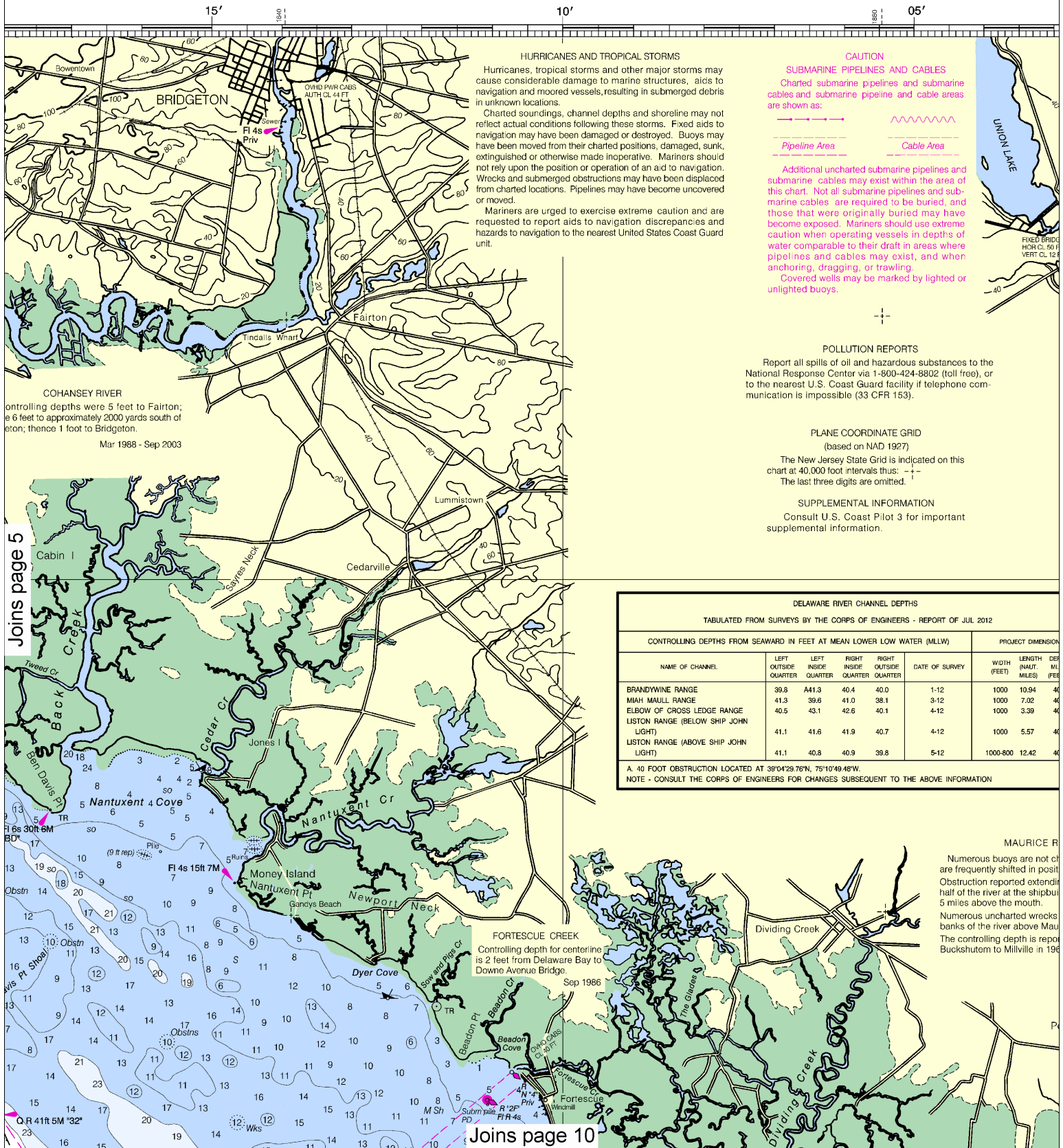
See Note on page 5.



Note: Chart grid lines are aligned with true north.



This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:106667. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.



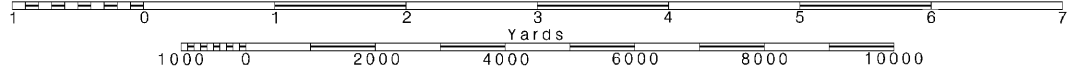
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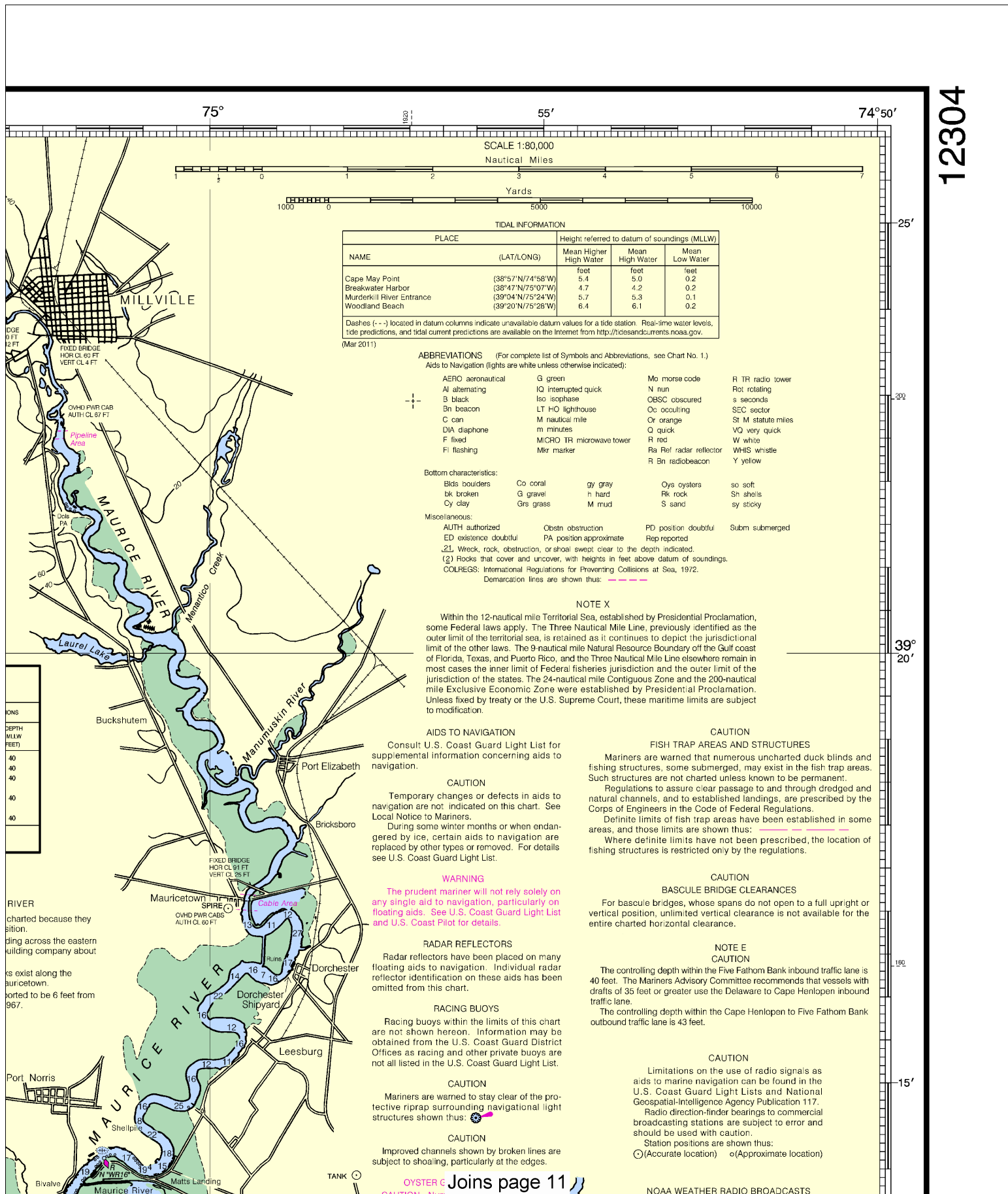
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Printed at reduced scale.

SCALE 1:80,000
Nautical Miles

See Note on page 5.





TIDAL INFORMATION		Height referred to datum of soundings (MLLW)		
PLACE				
NAME	(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water
Cape May Point	(38°57'N/74°58'W)	feet 5.4	feet 5.0	feet 0.2
Breakwater Harbor	(38°47'N/75°07'W)	4.7	4.2	0.2
Murderkill River Entrance	(39°04'N/75°24'W)	5.7	5.3	0.1
Woodland Beach	(39°20'N/75°28'W)	6.4	6.1	0.2

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(Mar 2011)

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Gr grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	
JL Wreck, rock, obstruction, or shoal swept clear to the depth indicated.			
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.			
COLREGS: International Regulations for Preventing Collisions at Sea, 1972.			
Demarcation lines are shown thus: ---			

NOTE X

Within the 12-nautical mile Territorial Sea, established by Presidential Proclamation, some Federal laws apply. The Three Nautical Mile Line, previously identified as the outer limit of the territorial sea, is retained as it continues to depict the jurisdictional limit of the other laws. The 9-nautical mile Natural Resource Boundary off the Gulf coast of Florida, Texas, and Puerto Rico, and the Three Nautical Mile Line elsewhere remain in most cases the inner limit of Federal fisheries jurisdiction and the outer limit of the jurisdiction of the states. The 24-nautical mile Contiguous Zone and the 200-nautical mile Exclusive Economic Zone were established by Presidential Proclamation. Unless fixed by treaty or the U.S. Supreme Court, these maritime limits are subject to modification.

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners. During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

RACING BUOYS

Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other private buoys are not all listed in the U.S. Coast Guard Light List.

CAUTION

Mariners are warned to stay clear of the protective riprap surrounding navigational light structures shown thus: ---

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION

FISH TRAP AREAS AND STRUCTURES

Mariners are warned that numerous uncharted duck blinds and fishing structures, some submerged, may exist in the fish trap areas. Such structures are not charted unless known to be permanent.

Regulations to assure clear passage to and through dredged and natural channels, and to established landings, are prescribed by the Corps of Engineers in the Code of Federal Regulations.

Definite limits of fish trap areas have been established in some areas, and those limits are shown thus: ---

Where definite limits have not been prescribed, the location of fishing structures is restricted only by the regulations.

CAUTION

BASCULE BRIDGE CLEARANCES

For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

NOTE E

CAUTION

The controlling depth within the Five Fathom Bank inbound traffic lane is 40 feet. The Mariners Advisory Committee recommends that vessels with drafts of 35 feet or greater use the Delaware to Cape Henlopen inbound traffic lane.

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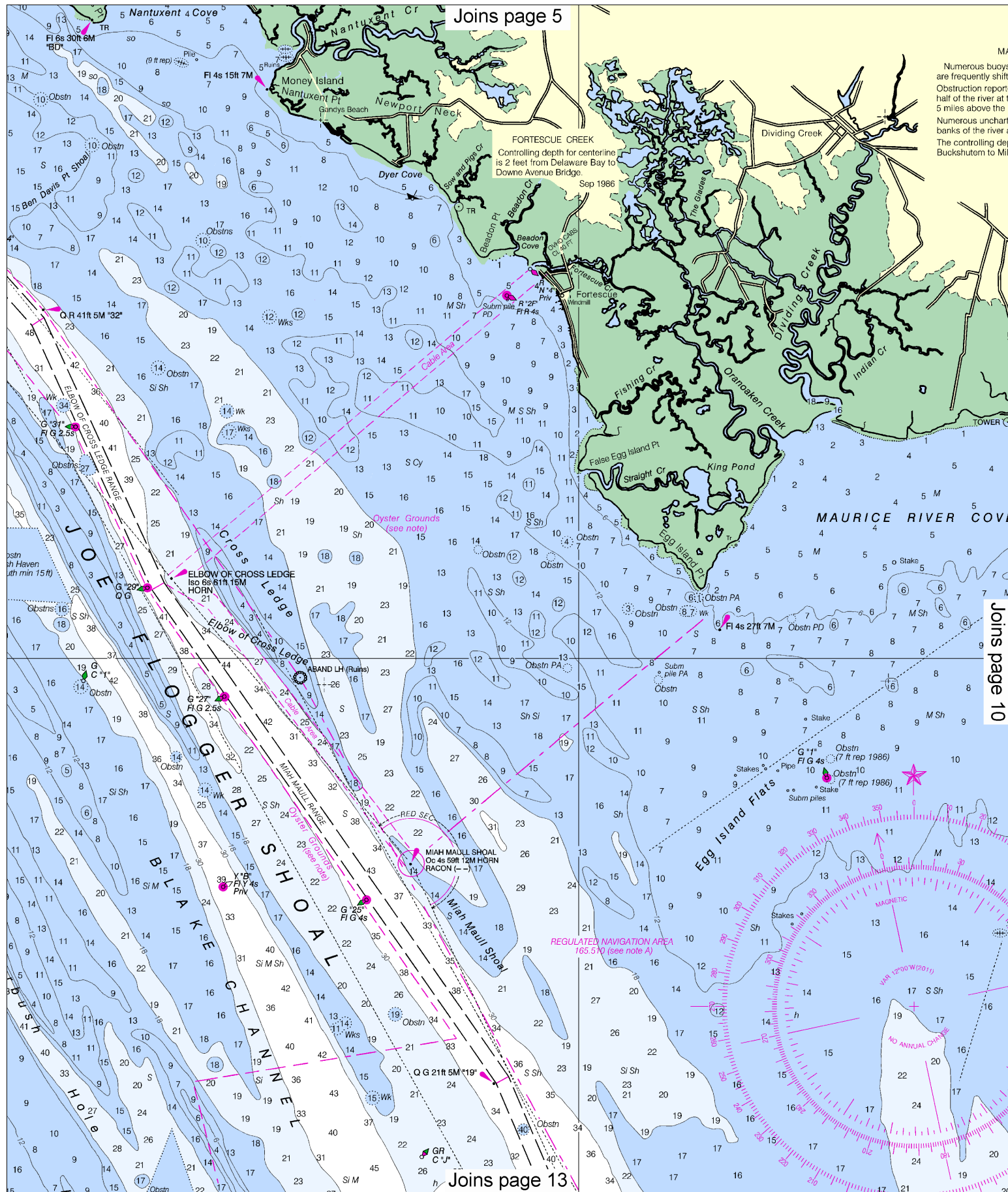
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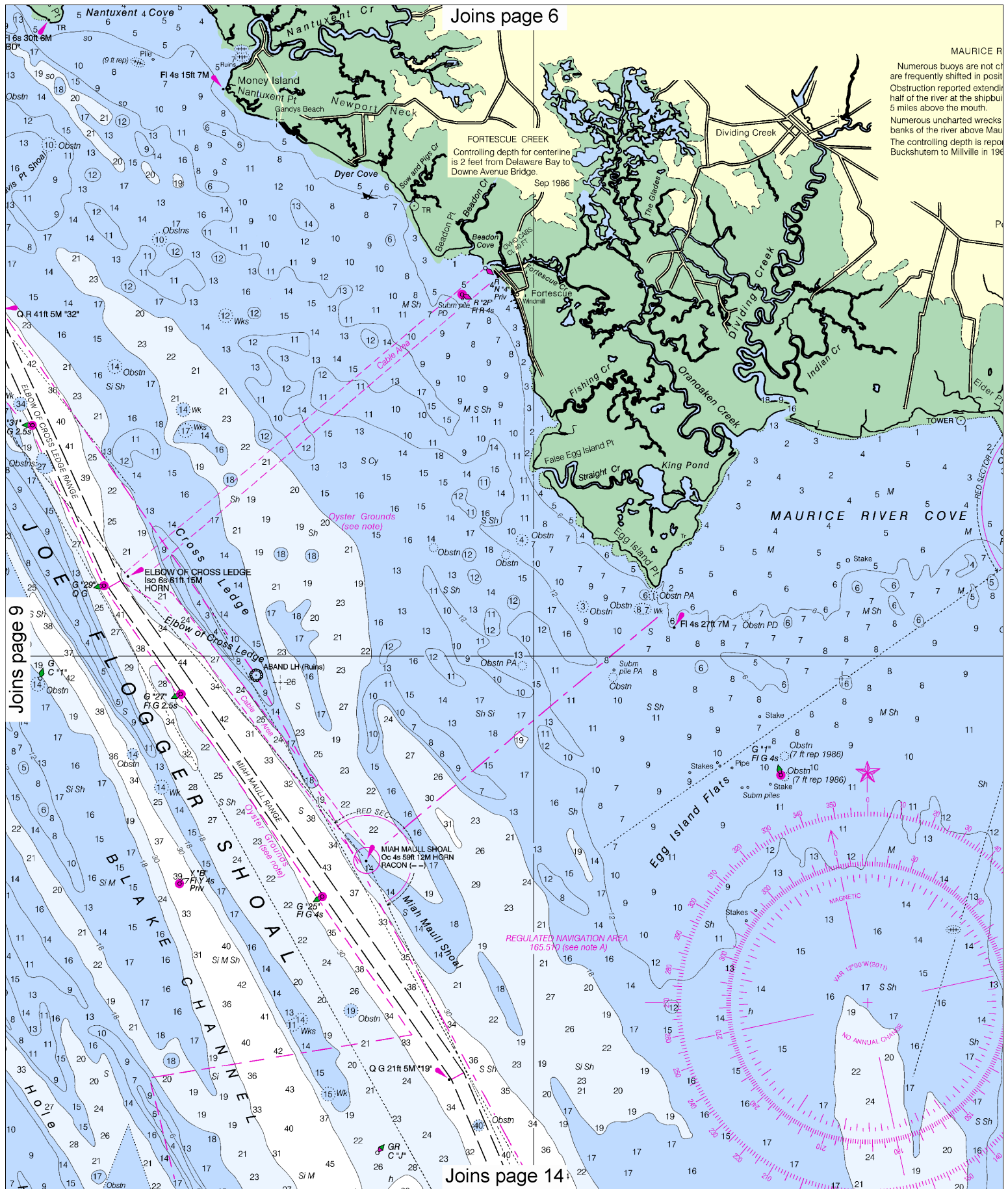
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Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus: ○ (Accurate location) ○ (Approximate location)

NOAA WEATHER RADIO BROADCASTS



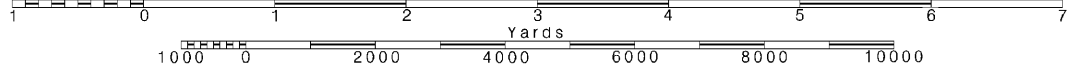


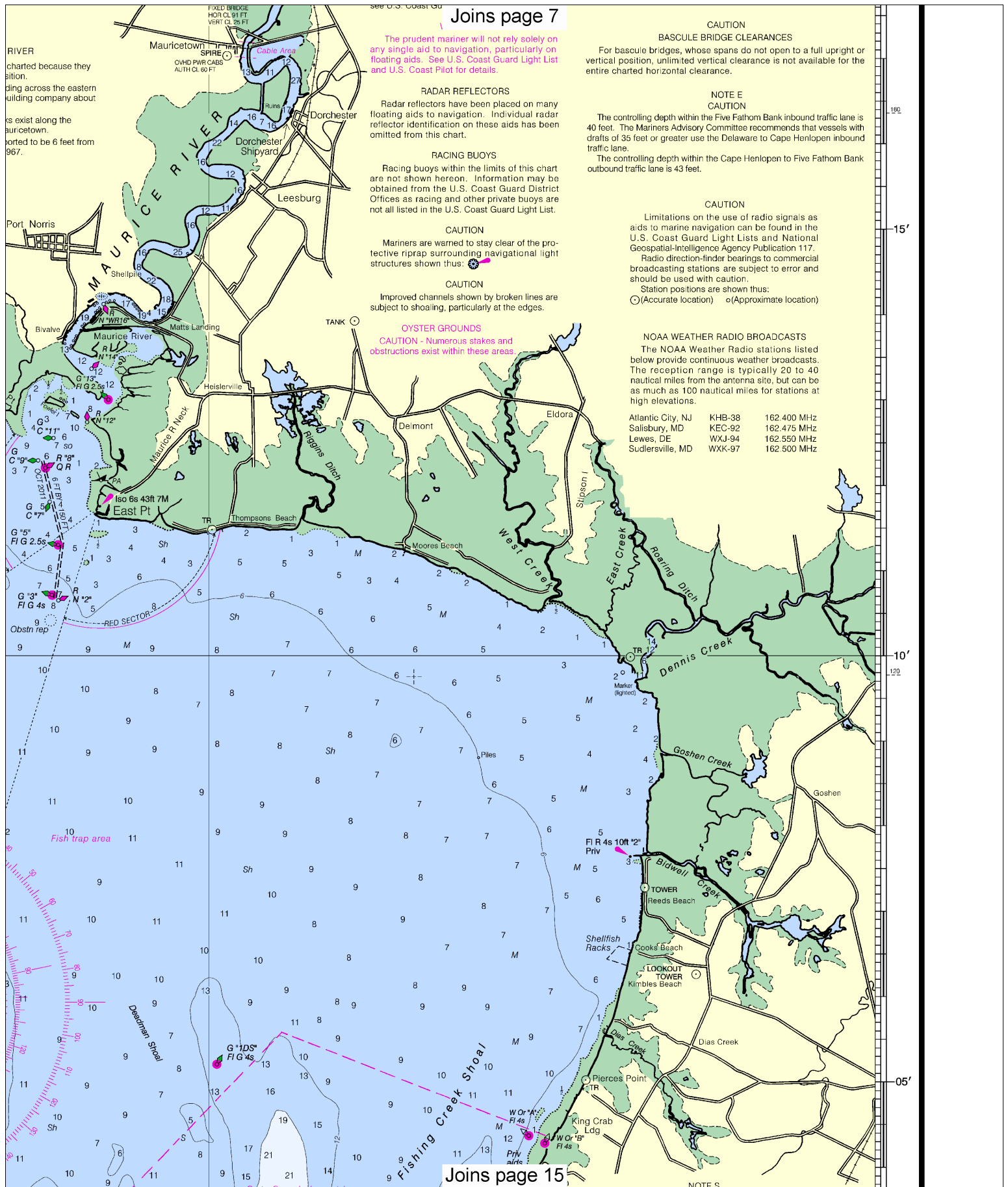
Note: Chart grid lines are aligned with true north.

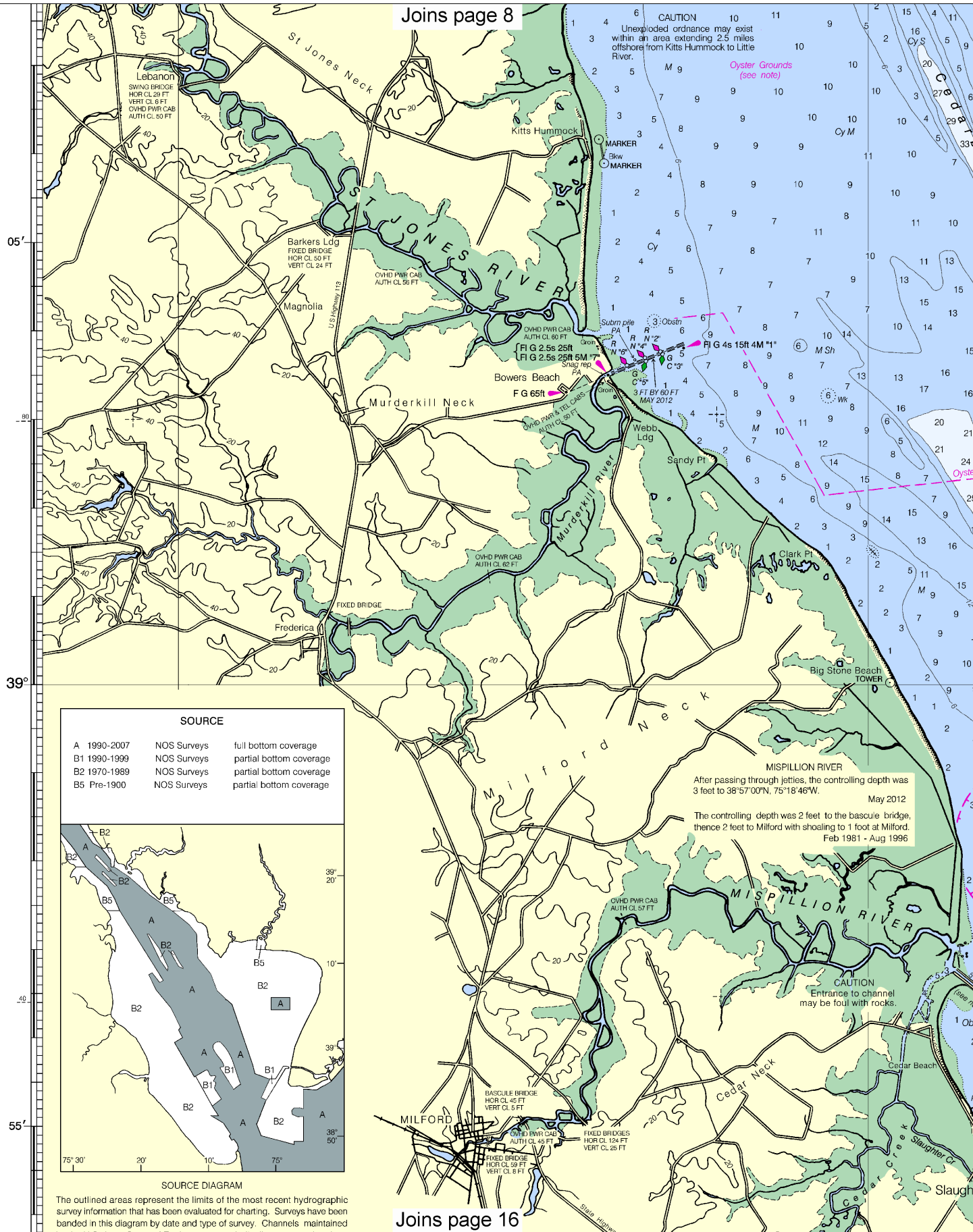
Printed at reduced scale.

SCALE 1:80,000
 Nautical Miles

See Note on page 5.





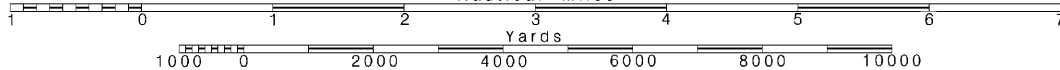


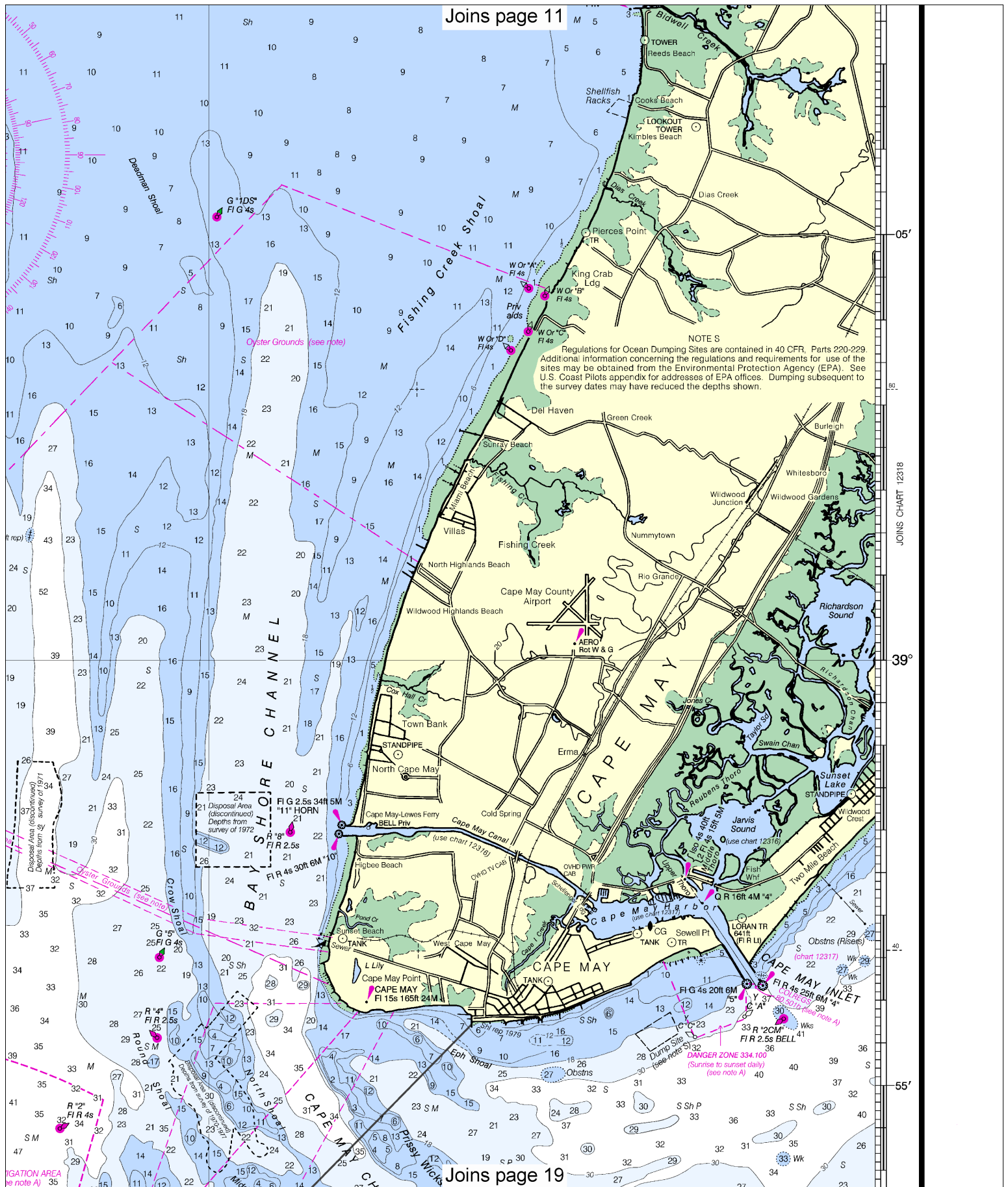
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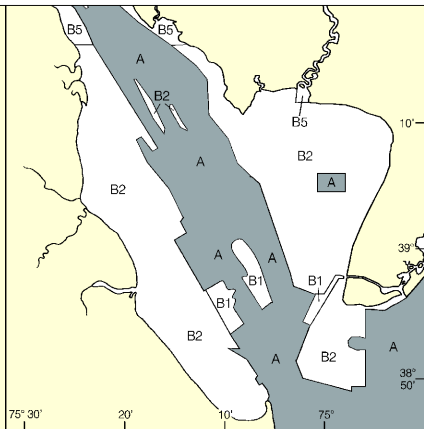


JOINS CHART 12318

39°

55'

Joins page 12



SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, *United States Coast Pilot*.



THE NATION'S CHARTMAKER SINCE 1807

UNITED STATES – EAST COAST
NEW JERSEY – DELAWARE

DELAWARE BAY

Additional information can be obtained at nauticalcharts.noaa.gov.

Mercator Projection
Scale 1:80,000 at Lat. 39°06'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

HORIZONTAL DATUM

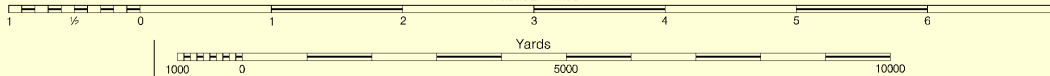
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.407" northward and 1.347" eastward to agree with this chart.

HEIGHTS

Heights in feet above Mean High Water.

SCALE 1:80,000

Nautical Miles



75° 30'

25'

1800

20'

NOTE A

Navigation regulations are published in Chapter 2, *U.S. Coast Pilot* 3. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 5th Coast Guard District in Portsmouth, Virginia or at the Office of the District Engineer, Corps of Engineers in Philadelphia, Pennsylvania.

Refer to charted regulation section numbers.

NOTE C

TRAFFIC SEPARATION SCHEME

One-way traffic lanes overprinted on this chart are RECOMMENDED for use by all vessels traveling between the points involved. They have been designed to aid in the prevention of collisions at the approaches to Delaware Bay, but are not intended in any way to supersede or alter the applicable Rules of the Road. Separation zones are intended to separate inbound and outbound traffic and to be free of ship traffic. Separation zones should not be used except for crossing purposes. When crossing traffic lanes and separation zones use extreme caution.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

NOTE B

DANGER AREA

Area is open to unrestricted surface navigation but all vessels are cautioned neither to anchor, dredge, trawl, lay cables, bottom, nor conduct any other similar type of operation because of residual danger from mines on the bottom.

NOTE D

PRECAUTIONARY AREA

Traffic within the PRECAUTIONARY AREA may consist of cruising pilots and vessels making the transition between operating in Delaware Bay and one of the traffic lanes. Mariners are advised to exercise extreme care in navigating within this area.

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, adding to improving this chart to the Chief, Marine Chart Division (N/C Service), NOAA, Silver Spring, Maryland 20910-3282.

46th Ed., May / 11 ■ Corrected through NM May 14/11
Corrected through LNM May 10/11

12304

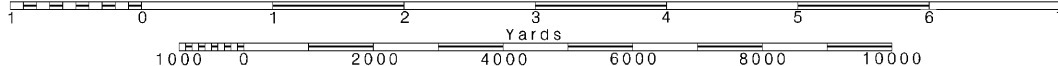
16

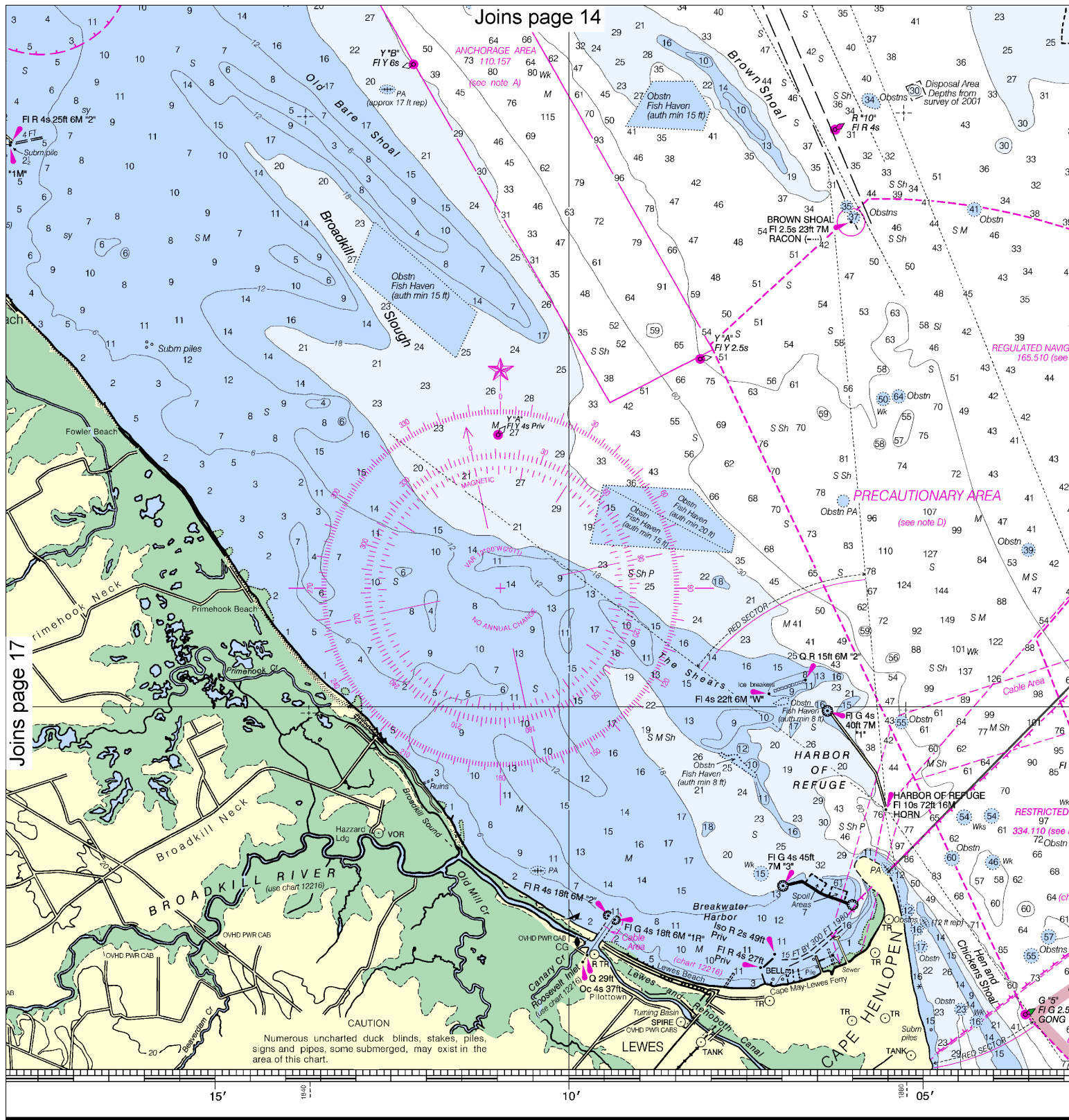
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

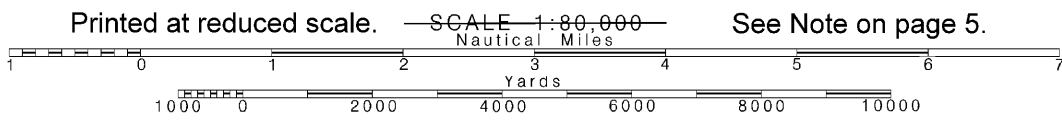
SCALE 1:80,000
Nautical Miles

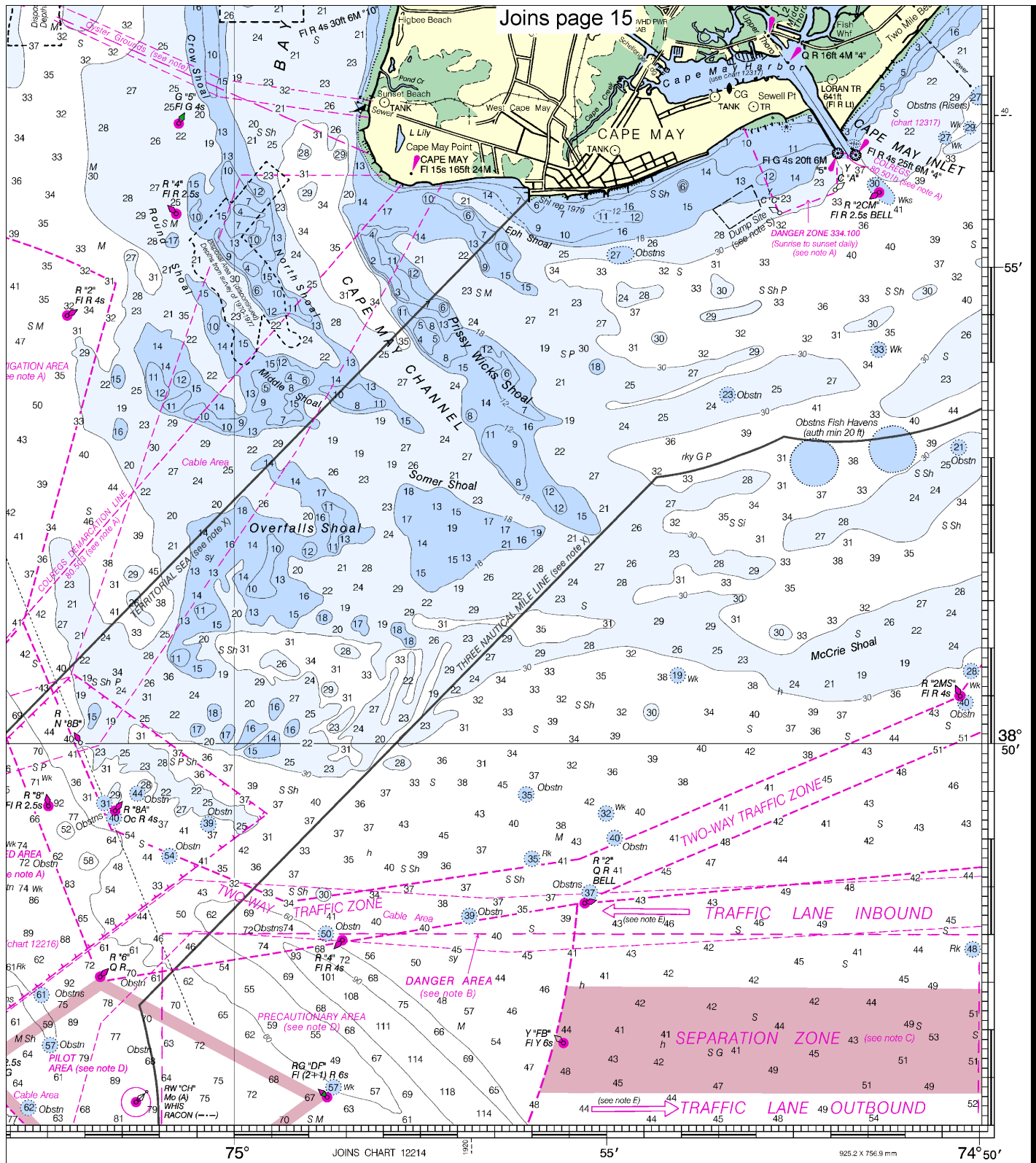
See Note on page 5.





Note: Chart grid lines are aligned with true north.





FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102
METERS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

Delaware Bay
SOUNDINGS IN FEET - SCALE 1:80,000

12304

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EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

<http://www.nws.noaa.gov/nwr/>

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!

Quick References

Nautical chart related products and information	—	http://www.nauticalcharts.noaa.gov
Online chart viewer	—	http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html
Report a chart discrepancy	—	http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx
Chart and chart related inquiries and comments	—	http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs
Chart updates (LNM and NM corrections)	—	http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html
Coast Pilot online	—	http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm
Tides and Currents	—	http://tidesandcurrents.noaa.gov
Marine Forecasts	—	http://www.nws.noaa.gov/om/marine/home.htm
National Data Buoy Center	—	http://www.ndbc.noaa.gov/
NowCoast web portal for coastal conditions	—	http://www.nowcoast.noaa.gov/
National Weather Service	—	http://www.weather.gov/
National Hurricane Center	—	http://www.nhc.noaa.gov/
Pacific Tsunami Warning Center	—	http://ptwc.weather.gov/
Contact Us	—	http://www.nauticalcharts.noaa.gov/staff/contact.htm



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NOAA's Office of Coast Survey



The Nation's Chartmaker